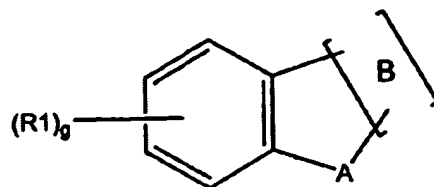


What is claimed is:

1. A compound of formula I,



I

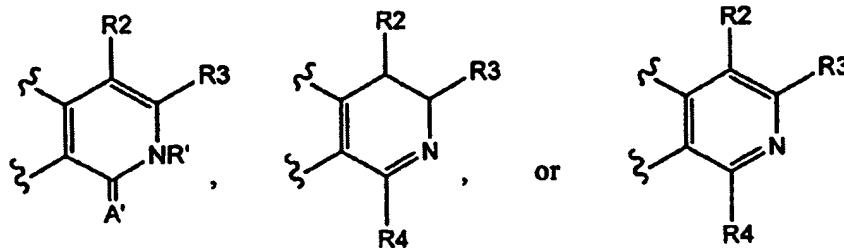
and pharmaceutically acceptable salts thereof, wherein

A is NR, O or S;

R is hydrogen, C₁ to C₅ alkyl, C₁ to C₅ acyl, C₁ to C₅ alkyloxycarbonyl, C₂ to C₅ alkenyl, C₂ to C₅ alkenylcarbonyl or C₂ to C₅ alkenyloxycarbonyl;

g is 0, 1, 2, 3, or 4; and

B is a ring forming a fused ring system with the ring containing A and is selected from;



wherein A' is as described above for A and NR' is as described above for NR,

R₁, R₂, R₃ and R₄ are independently selected from:

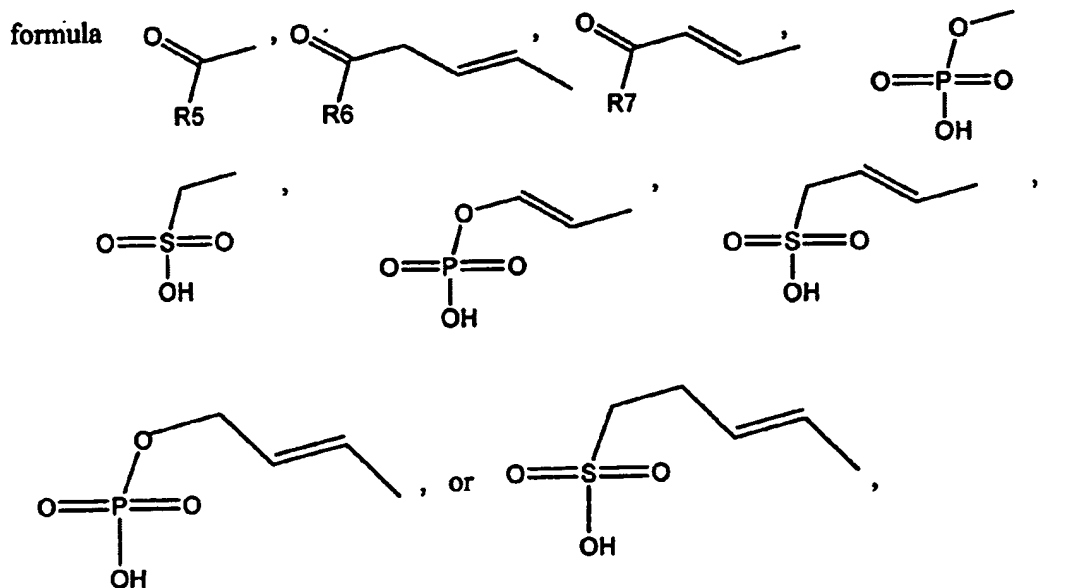
(i) hydrogen, C₁ to C₅ alkyl, OH, NH₂, C₁ to C₅ alkylamino, di(C₁ to C₅ alkyl)amino, C₁ to C₅ alkylcarbonyl, C₁ to C₅ alkyloxycarbonyl, C₁ to C₅ alkylcarbonyloxy, carboxyl, C₁ to C₅ alkyl phosphonate, C₁ to C₅ alkenyl

phosphonate, C₁ to C₅ alkyl phosphate, C₁ to C₅ alkenyl phosphate, C₁ to C₅ alkyl sulfonate, C₁ to C₅ alkenyl sulfonate, halo, halo(C₁ to C₅)alkyl, amino(C₁ to C₅)alkyl, hydroxyl(C₁ to C₅)alkyl, (C₁ to C₅)alkoxyl C₁ to C₅ alkyl, NO₂, C₁ to C₅ alkylthio, SO₃H, PO₄, PO₃H, NH₄, C₂ to C₅ alkenyl, C₂ to C₅ alkenyloxy, C₂ to C₄ alkenylamino, di(C₂ to C₅ alkenylcarbonyl), C₂ to C₅ alkenyloxycarbonyl, C₂ to C₄ alkylcarbonyloxy, halo(C₂ to C₅)alkynyl, amino(C₂ to C₅)alkenyl, hydroxy(C₂ to C₅)alkenyl, (C₁ to C₅ alkoxy) C₂ to C₅ alkenyl, C₂ to C₅ alkenylthio, C₂ to C₄ alkynyl, C₂ to C₅ alkynyloxy, C₂ to C₅ alkynylamino, di(C₂ to C₅ alkynyl)amino, C₂ to C₅ alkynylcarbonyl, C₂ to C₅ alkynyloxycarbonyl, C₂ to C₅ alkynylcarbonyloxy, halo(C₂ to C₅)alkynyl, amino(C₂ to C₅)alkynyl; hydroxy(C₂ to C₅)alkynyl, (C₁ to C₅ alkoxy) C₂ to C₅ alkynyl;

(ii) C₁ to C₅ alkoxy; and

(iii) aryl and arylalkyl.

2. A compound of formula I according to claim 1, wherein R₁ represents a residue of the formula

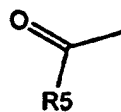


wherein R₅, R₆ and R₇ are independently selected from H, OH, NR₂, NR₃, and

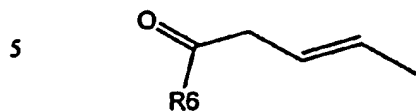
R is hydrogen, C₁ to C₅ alkyl, C₁ to C₅ acyl, C₁ to C₅ alkyloxycarbonyl, C₂ to C₅ alkenyl, C₂

to C₅ alkenylcarbonyl or C₂ to C₅ alkenyloxycarbonyl.

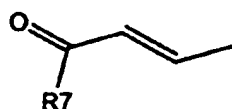
3. A compound according to claim 2 wherein g is 1 and R1 is



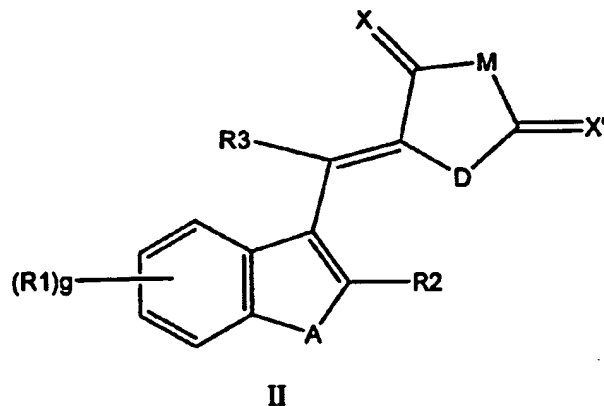
4. A compound according to claim 2 wherein g is 1 and R1 is



5. A compound according to claim 2 wherein R1 is



10 6. A compound of formula II



and pharmaceutically acceptable salts thereof, wherein

A, D and M are independently NR, O or S;

R is hydrogen, C₁ to C₅ alkyl, C₁ to C₅ acyl, C₁ to C₅ alkyloxycarbonyl, C₂ to C₅ alkenyl, C₂ to C₅ alkenylcarbonyl or C₂ to C₅ alkenyloxycarbonyl;

20 g is 0, 1, 2, 3 or 4; and

X and X' are independently O or S;

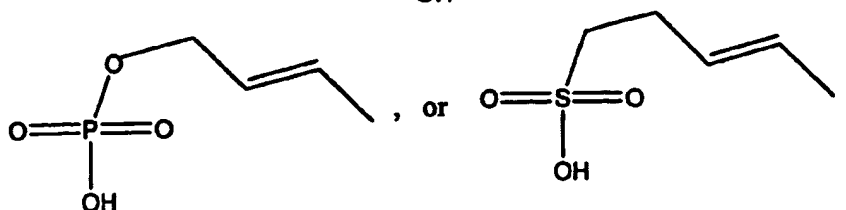
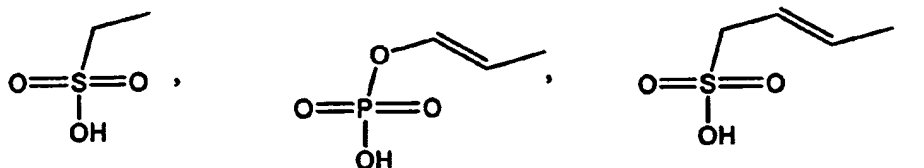
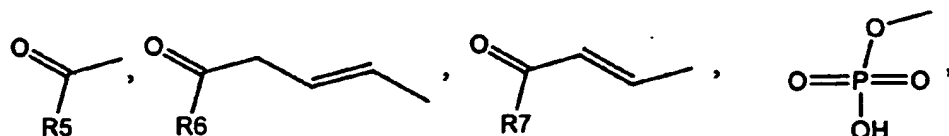
R1, R2 and R3 are independently selected from:

(i) hydrogen, C₁ to C₅ alkyl, OH, NH₂, C₁ to C₅ alkylamino, di(C₁ to C₅ alkyl)amino, C₁ to C₅ alkylcarbonyl, C₁ to C₅ alkyloxycarbonyl, C₁ to C₅ alkylcarbonyloxy, carboxyl, C₁ to C₅ alkyl phosphonate, C₁ to C₅ alkenyl phosphonate, C₁ to C₅ alkyl phosphate, C₁ to C₅ alkenyl phosphate, C₁ to C₅ alkyl sulfonate, C₁ to C₅ alkenyl sulfonate, halo, halo(C₁ to C₅)alkyl, amino(C₁ to C₅)alkyl, hydroxyl(C₁ to C₅)alkyl, (C₁ to C₅)alkoxy C₁ to C₅ alkyl, NO₂, C₁ to C₅ alkylthio, SO₃H, PO₄, PO₃H, NH₄, C₂ to C₅ alkenyl, C₂ to C₅ alkenyloxy, C₂ to C₄ alkenylamino, di(C₂ to C₅ alkenylcarbonyl), C₂ to C₅ alkenyloxycarbonyl, C₂ to C₄ alkylcarbonyloxy, halo(C₂ to C₅)alkynyl, amino(C₂ to C₅)alkenyl, hydroxy(C₂ to C₅)alkenyl, (C₁ to C₅ alkoxy) C₂ to C₅ alkenyl, C₂ to C₅ alkenylthio, C₂ to C₄ alkynyl, C₂ to C₅ alkynyloxy, C₂ to C₅ alkynylamino, di(C₂ to C₅ alkynyl)amino, C₂ to C₅ alkynylcarbonyl, C₂ to C₅ alkynyloxycarbonyl, C₂ to C₅ alkynylcarbonyloxy, halo(C₂ to C₅)alkynyl, amino(C₂ to C₅)alkynyl, hydroxy(C₂ to C₅)alkynyl, (C₁ to C₅ alkoxy) C₂ to C₅ alkynyl;

(ii) C₁ to C₅ alkoxy; and

(iii) aryl and arylalkyl.

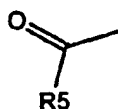
7. A compound of formula II according to claim 6, wherein R1 represents a residue of the A compound of formula I according to claim 1, wherein R1 represents a residue of the formula



wherein R5, R6 and R7 are independently selected from H, OH, NR₂, NR₃, and R is hydrogen, C₁ to C₃ alkyl, C₁ to C₃ acyl, C₁ to C₃ alkyloxycarbonyl, C₂ to C₅ alkenyl, C₂ to C₅ alkenylcarbonyl or C₂ to C₅ alkenyloxycarbonyl.

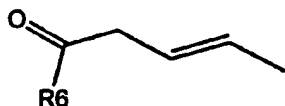
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8. A compound according to claim 7 wherein g is 1 and R1 is

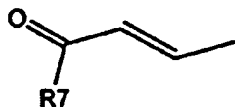


9. A compound according to claim 7 wherein g is 1 and R1 is

10



10. A compound according to claim 7 wherein g is 1 and R1 is



15

11. A compound according to claim 1 selected from the group consisting of:

1, 2-dihydro-1-oxobenzofuro[2,3-c]pyridine-7-carboxylic acid;

1,2-dihydro-1-oxobenzofuro[2,3-c]pyridine-6-carboxylic acid;

(2E)-3-(1,2-dihydro-1-oxobenzofuro[2,3-c]pyridin-6-yl)acrylic acid; and

1,2-dihydro-1-oxobenzofuro[2,3-c]pyridine-8-carboxylic acid.

20

12. A compound according to claim 6 selected from the group consisting of:

(Z)-5-((1H-indol-3-yl)methylene)-2-thioxazolidin-4-one;

25

(Z)-5-((1H-indol-3-yl)methylene)oxazolidine-2,4-dione;

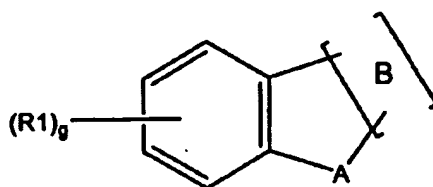
(Z)-5-((1H-indol-3-yl)methylene)thiazolidine-2,4-dione;

(Z)-5-((1H-indol-3-yl)methylene)-2-thiothiazolidin-4-one, and

5 pharmaceutically acceptable salts thereof.

13. A method of treating a central nervous system (CNS) disorder associated with the striatal region of the brain, the method comprising:

administering an effective dose of a pharmaceutical formulation comprising a
10 compound of formula I to a patient in need thereof exhibiting symptoms of a CNS disorder so as to attenuate said symptoms, wherein formula I is



I

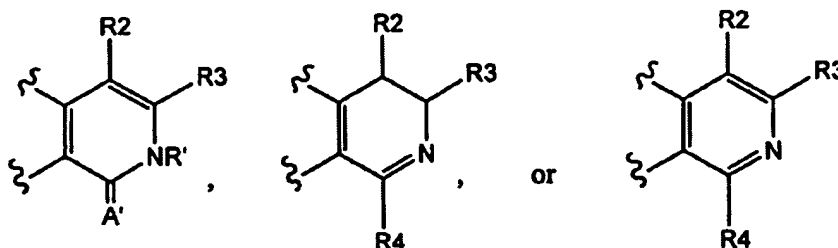
and pharmaceutically acceptable salts thereof, wherein

A is NR, O or S;

15 R is hydrogen, C_1 to C_5 alkyl, C_1 to C_5 acyl, C_1 to C_5 alkyloxycarbonyl, C_2 to C_5 alkenyl, C_2 to C_5 alkenylcarbonyl or C_2 to C_5 alkenyloxycarbonyl;

g is 0, 1, 2, 3, or 4; and

B is a ring forming a fused ring system with the ring containing A and is
selected from;



50

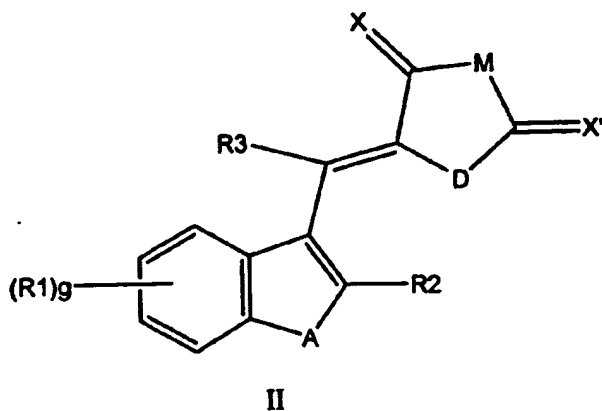
wherein A' is as described above for A and NR' is as described above for NR,
R1, R2, R3 and R4 are independently selected from:

(i) hydrogen, C₁ to C₅ alkyl, OH, NH₂, C₁ to C₅ alkylamino, di(C₁ to C₅
alkyl)amino, C₁ to C₅ alkylcarbonyl, C₁ to C₅ alkyloxycarbonyl, C₁ to C₅
alkylcarbonyloxy, carboxyl, halo, halo(C₁ to C₅)alkyl, amino(C₁ to C₅)alkyl,
hydroxyl(C₁ to C₅)alkyl, (C₁ to C₅)alkoxy) C₁ to C₅ alkyl, NO₂, C₁ to C₅ alkylthio,
SO₃H, PO₄, PO₃H, NH₄, C₂ to C₅ alkenyl, C₂ to C₅ alkenyloxy, C₂ to C₄
alkenylamino, di(C₂ to C₅ alkenylcarbonyl), C₂ to C₅ alkenyloxycarbonyl, C₂ to C₄
alkylcarbonyloxy, halo(C₂ to C₅)alkynyl, amino(C₂ to C₅)alkenyl, hydroxy(C₂ to
C₅)alkenyl, (C₁ to C₅ alkoxy) C₂ to C₅ alkenyl, C₂ to C₅ alkenylthio, C₂ to C₄ alkynyl,
C₂ to C₅ alkynyloxy, C₂ to C₅ alkynylamino, di(C₂ to C₅ alkynyl)amino, C₂ to C₅
alkynylcarbonyl, C₂ to C₅ alkynyloxycarbonyl, C₂ to C₅ alkynylcarbonyloxy, halo(C₂
to C₅)alkynyl, amino(C₂ to C₅)alkynyl, hydroxy(C₂ to C₅)alkynyl, (C₁ to C₅ alkoxy)
C₂ to C₅ alkynyl;

(ii) C₁ to C₅ alkoxy; and

(iii) aryl and arylalkyl.

13. A method for treating a central nervous system (CNS) disorder associated with the
striatal region of the brain, the method comprising administering an effective dose of a
pharmaceutical formulation comprising a compound of formula II to a patient in need
thereof exhibiting symptoms of a CNS disorder so as to attenuate said symptoms, wherein
formula II is



and pharmaceutically acceptable salts thereof, wherein

A, D and M are independently NR, O or S;

R is hydrogen, C₁ to C₅ alkyl, C₁ to C₅ acyl, C₁ to C₅ alkyloxycarbonyl, C₂ to C₅ alkenyl, C₂ to C₅ alkenylcarbonyl or C₂ to C₅ alkenyloxycarbonyl;

g is 0, 1, 2, 3 or 4; and

5 X and X' are independently O or S;

R₁, R₂ and R₃ are independently selected from:

(i) hydrogen, C₁ to C₅ alkyl, OH, NH₂, C₁ to C₅ alkylamino, di(C₁ to C₅ alkyl)amino, C₁ to C₅ alkylcarbonyl, C₁ to C₅ alkyloxycarbonyl, C₁ to C₅ alkylcarbonyloxy, carboxyl, halo, halo(C₁ to C₅)alkyl, amino(C₁ to C₅)alkyl, hydroxyl(C₁ to C₅)alkyl, (C₁ to C₅)alkoxy C₁ to C₅ alkyl, NO₂, C₁ to C₅ alkylthio, SO₃H, PO₄, PO₃H, NH₄, C₂ to C₅ alkenyl, C₂ to C₅ alkenyloxy, C₂ to C₄ alkenylamino, di(C₂ to C₅ alkenylcarbonyl), C₂ to C₅ alkenyloxycarbonyl, C₂ to C₄ alkylcarbonyloxy, halo(C₂ to C₅)alkynyl, amino(C₂ to C₅)alkenyl, hydroxy(C₂ to C₅)alkenyl, (C₁ to C₅ alkoxy) C₂ to C₅ alkenyl, C₂ to C₅ alkenylthio, C₂ to C₄ alkynyl, C₂ to C₅ alkynyloxy, C₂ to C₅ alkynylamino, di(C₂ to C₅ alkynyl)amino, C₂ to C₅ alkynylcarbonyl, C₂ to C₅ alkynyloxycarbonyl, C₂ to C₅ alkynylcarbonyloxy, halo(C₂ to C₅)alkynyl, amino(C₂ to C₅)alkynyl, hydroxy(C₂ to C₅)alkynyl, (C₁ to C₅ alkoxy) C₂ to C₅ alkynyl;

(ii) C₁ to C₅ alkoxy; and

20 (iii) aryl and arylalkyl.

Rule 126a15.
14. A method for treating a CNS disorder according to either claim 12 or 13, wherein the CNS disorder is psychosis, schizophrenia, or obsessive-compulsive disorder.

16
15. A method for modulating PDE10A expression in a subject, the method comprising:

25 administering a compound of formula I of formula II as claimed in either claim 1 or claim 6 in a pharmaceutical formulation;

measuring isolated PDE10A mRNA from a sample of blood from the patient using a quantitative replicative procedure such as QPCR; and

comparing the level of isolated mRNA from blood from the subject before and after administering the compound of formula II.

Rule
126a
5

17.
16. A method for modulating PDE10A according to claim 15, wherein the compound of formula I or formula II is selected from the group consisting of: 1, 2-dihydro-1-oxobenzofuro[2,3-c]pyridine-7-carboxylic acid; 1,2-dihydro-1-oxobenzofuro[2,3-c]pyridine-6-carboxylic acid; (2E)-3-(1,2-dihydro-1-oxobenzofuro[2,3-c]pyridin-6-yl)acrylic acid; 1,2-dihydro-1-oxobenzofuro[2,3-c]pyridine-8-carboxylic acid; (Z)-5-((1H-indol-3-yl)methylene)-2-thioxazolidin-4-one; (Z)-5-((1H-indol-3-yl)methylene)oxazolidine-2,4-dione; (Z)-5-((1H-indol-3-yl)methylene)thiazolidine-2,4-dione; (Z)-5-((1H-indol-3-yl)methylene)-2-thiothiazolidin-4-one, and pharmaceutically acceptable salts thereof.

10

18.
17. A method of inhibiting PDE10A according to claim 15, wherein modulating further comprises inhibiting.

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